VOLUME CONTENTS

1990 NUMBER 1

CONTENTS

V. A. Barinov and S. A. Sovalov	1	Development of methods for control of power system operating conditions
V. P. Kasilov	16	Determination of the mechanical characteristics of wave-type electrical machines
Z. R. Dzhendubayev	27	The main equations of an induction motor with two stator windings
V. I. Chaban, Ye. V. Kharchenko and V. I. Kozubash	34	An algorithm for calculating the vibration characteristics of an induction motor rotor
V. V. Burgsdorf	43	Parameters of lightning currents and selection of their design values
A. I. Titko	54	Electromagnetic processes in the end regions of high power turbogenerators under different screening conditions
A. I. Leviush, V. T. Uzhegov and V. I. Katunyan	63	Mathematical modelling of negative sequence power directional relays for investigation of their performance with parametric resonance in an EHV circuit
Ye. V. Kirievskii, V. V. Mikhailov and A. S. Khanzhiev	74	Flexible relay protection systems with restructurable architecture for autonomous power systems
	87	List of papers not translated from *Elektrichestvo* Nos 1–3, 1990

1990 NUMBER 2

CONTENTS

V. S. Chuprikov	1	Control of a static thyristor compensator for electrical power lines
S. G. Voronin	14	Synchronization of the rotor rotation of rectifier motors
Sh. I. Lutidze, V. E. Ignatov, I. V. Karlash and V. N. Noskov	21	An experimental model of a three-phase cryotron converter at 50 Hz
L. L. Bogaturev	28	Estimation of and provision for interconnected power systems reliability
V. I. Tarasov and A. M. Slobodskoi	44	Minimization method for calculation of the stability of electrical power systems

G. V. Karpov	55	Experimental definition of hydroelectric generator characteristics under load
S. L. Kazaryan	63	The selection of one-layer circuit windings
Ya. B. Danilevich, G. G. Schastlivyi, A. I. Titko and **G. M. Fedorenko**	71	Monitoring and prediction of the load capabilities of generators with respect to reactive power
V. N. Antipov and **E. M. Lutkin**	83	Commutation limitations of direct current motors regulated over a wide speed range
	97	List of papers not translated from *Elektrichestvo* Nos 4–6, 1990

1990 NUMBER 3

CONTENTS

A. Kh. Adzhiyev and **E. M. Bogachenko**	1	The use of radio methods to estimate the parameters of lightning discharges used in thunderstorm protection
Yu. A. Bortsov	9	The development and possibility of wide introduction of adaptive electric drives
T. Glinka	17	Electromagnetic coupling of the armature windings and the excitation of direct current motors under transient conditions
G. N. Alexandrov, V. L. Ivanov and **A. I. Afanasyev**	25	Electrical breakdown characteristics of supporting insulation structures for limiting the design level of ultrahigh voltage
I. T. Talishinskii and **Z. T. Khoborkova**	34	A method of analysis for electromagnetic fields and forces in the frontal parts of windings in synchronous machines
L. A. Biber, Y. Y. Lubarskii, V. M. Nadtochii and **A. S. Tseitlin**	45	Expert system for vibration control of a hydroelectric generator
N. P. Polyakov and **V V. Sinenko**	53	Increasing the specific energy commutated in pulse-compression units
A. S. Sokhransky	60	Power losses arising from local corona in alternating current transmission lines
R. V. Filtz	69	A numerical method of calculation for Maxwell's equations used to analyse the fields in electrical machines by the method of finite differences
A. A. Nibikitin and **V. E. Polyakov**	83	Improvement of the dynamic stability of capacitor bank protection systems
B. D. Waxer, W. O. Kogan and **B. A. Reshko**	93	Decreasing the electrical field irregularity in the inter-phase zones of high-voltage machine stator windings
	99	List of papers not translated from *Elektrichestvo* Nos 7–9, 1990

CONTENTS

A. A. Lubsanov	1	Thermal analysis of submerged direct current machines
M. Y. Kletzel, V. V. Musin, S. N. Simonov and **V. E. Polyakov**	10	Protection of electric motors with a phase-sensitive majority scheme and functional diagnostics
A. Ya. Zelwiansky and **R. R. Mamoshin**	21	Calculation of the average power loss in a power supply system with a voltage regulator
Yu. P. Petrov and **E. A. Yarv**	26	Optimization of electric drives with flexible couplings, taking account of friction
V. A. Barinov, A. A. Gurov, V. Yu. Korchak, A. S. Manevich and **Yu. V. Mitin**	33	Electrical power supply to users with rapidly varying loads
V. V. Bushuyev, A. Kh. Kalyuzhnyi, L. V. Krechmer and **A. A. Shushuyev**	41	Application of phase-shifting devices for power flow control in power systems
V. M. Lupkin	50	Theoretical problems and analysis of high torque electromagnetic brakes
B. I. Petlenko and **A. Ye. Dergachev**	61	Optimization of a composite electromagnetic screen in relation to mass
V. A. Stroyev, V. I. Chekhov and **S. K. Aslanyan**	67	Control of conditions in electric power systems using discrete sources of reactive power
V. I. Anders, V. G. Graponov and **V. A. Lopatin**	78	Analysis of electromagnetic processes in an alternating current traction motor
B. I. Zubrenkov, A. I. Kaplin, V. S. Malyshev and **M. F. Manyukov**	87	Analysis of induction motor vibration during start-up
	95	List of papers not translated from *Elektrichestvo* Nos 10–12, 1990
	i	Volume Contents/Author Index to the 1990 Volume